CHAPTER - I
INTRODUCTION AND DESIGN OF THE STUDY

Development of an economy necessarily depends upon its financial system and the rate of new capital formation, which can be achieved by mobilizing savings and adopting an investment pattern. Savings form an important source of capital formation. Considered as the safest of all options, banks have been the roots of the financial systems in India. Today the interest rate structure is headed southwards, keeping in line with global trends. The inflation is creeping up, which means the value of money saved goes down instead of going up. This effectively mars any chance of gaining from investment in banks. Just like banks, post-offices offer scope for investment. The investments are safe. They attract the attention of small, retail investors. This option too is likely to loose attraction on account of reduction in the rates offered. Another oft-used route to invest has been the fixed deposit schemes floated by companies. The safer a company is rated, the lesser the return offered. However, there are several potential road blocks. The danger of financial position is not understood by the investors. Liquidity is a major problem. Safety of principal amount has been found lacking. These options are essential for risk-averse people who think of safety. For the brave, stock markets provide an option to invest in a high risk and high return shares. People generally are clueless as to how the stock market functions and in the process can endanger the hard-earned money. For those who are not adept at understanding the stock market, mutual funds come into picture. Investing in mutual fund solves the issue of ‘where’ to invest. Small investments, over a period of time, result in large wealth and help fulfill our dreams and aspirations. Mutual funds can offer the advantages of diversification and professional management.
THEORIES ON INVESTORS’ ATTITUDE

Regret Theory

Fear of regret, or simply regret, theory deals with the emotional reaction people experience after realizing they have made an error in judgment. Faced with the prospect of selling a stock, investors become emotionally affected by the price at which they purchased the stock. So, they avoid selling it as a way to avoid the regret of having made a bad investment, as well as the embarrassment of reporting a loss.

Regret theory can also hold true for investors when they discover that a stock they had only considered buying has increased in value. Some investors avoid the possibility of feeling this regret by following the conventional wisdom and buying only stocks that everyone else is buying, rationalizing their decision with “everyone else is
doing it”. Oddly enough, many people feel much less embarrassed about losing money on a popular stock that half the world owns than about losing on an unknown or unpopular stock.

**Mental Accounting**

Humans have a tendency to place particular events into mental compartments, and the difference between these compartments sometimes impacts our behavior more than the events themselves.

An investing example of mental accounting is best illustrated by the hesitation to sell an investment that once had monstrous gains and now has a modest gain. During an economic boom and bull market, people get accustomed to healthy, albeit paper, gains. When the market correction deflates investors’ net worth, they are more hesitant to sell at the smaller profit margin. They create mental compartments for the gains they once had, causing them to wait for the return of that gainful period.

**Prospect/Loss-Aversion Theory**

Prospect theory suggests people express a different degree of emotion towards gains than towards losses. Individuals are more stressed by prospective losses than they are happy from equal gains.

Prospect theory also explains why investors hold onto losing stocks: people often take more risks to avoid losses than to realize gains. For this reason, investors willingly remain in a risky stock position, hoping the price will bounce back. Gamblers on a losing streak will behave in a similar fashion, doubling up bets in a bid to recoup what has already been lost. So, despite our rational desire to get a return for the risks we take, we tend to value something we own higher than the price we would normally be prepared to pay for it.
The loss-aversion theory points to another reason why investors might choose to hold their losers and sell their winners: they may believe that today’s losers may soon outperform today’s winners. Investors often make the mistake of chasing market action by investing in stocks or funds which garner the most attention. Research shows that money flows into high-performance mutual funds more rapidly than money flows out from funds that are underperforming.

**Anchoring**

In the absence of better or new information, investors often assume that the market price is the correct price. People tend to place too much credence in recent market views, opinions and events, and mistakenly extrapolate recent trends that differ from historical, long-term averages and probabilities.

In bull markets, investment decisions are often influenced by price anchors, prices deemed significant because of their closeness to recent prices. This makes the more distant returns of the past irrelevant in investors’ decisions.

**Over/Under-Reacting**

Investors get optimistic when the market goes up, assuming it will continue to do so. Conversely, investors become extremely pessimistic during downturns. A consequence of anchoring, or placing too much importance on recent events while ignoring historical data, is an over- or under-reaction to market events which results in prices falling too much on bad news and rising too much on good news. At the peak of optimism, investor greed moves stocks beyond their intrinsic values. Extreme cases of over- or under-reaction to market events may lead to market panics and crashes.
Overconfidence

People generally rate themselves as being above average in their abilities. They also overestimate the precision of their knowledge and their knowledge relative to others. Many investors believe they can consistently time the market. But in reality there's an overwhelming amount of evidence that proves otherwise. Overconfidence results in excess trades, with trading costs denting profits.

STATEMENT OF THE PROBLEM

It is said that ‘necessity is the mother of invention’. Innovation has always been the spirit of human nature. In the financial sector also, several new instruments have been innovated in tune with market needs. The constraints of banks to provide growth with market yields for the investors’ section of society has given birth to one more new instrument, the mutual fund.

A mutual fund is a special type of institution, a trust or an investment company which acts as an investment intermediary and invests the savings of large number of people to the corporate securities in such a way that investors get steady returns, capital appreciation at a low risk. It is essentially a mechanism of pooling together the savings of a large number of investors for collecting investment with an avowed objective of attractive yields and appreciation in their values. The concept of 'Mutual Fund' is a new feature in Indian capital market but not to international capital markets. A mutual fund in the most suitable investment for the retail investors as it offers an opportunity to invest in a diversified, professionally managed portfolio at a relatively low cost. At the retail level, investors are unique and are a highly heterogeneous group. A large number of investment options are available to investors. Currently there are large numbers of schemes available and asset management companies (AMCs) compete against one
another by launching new products or repositioning old ones. Unless mutual fund schemes are tailored to the changing needs, and the AMCs understand the fund selection behaviour of the investors, survival of funds will be difficult in future.

CONCEPT OF MUTUAL FUND

With the growth of economy and capital market in India, the size of investors also increased rapidly. In fact, small investors in India have regularly invested in public issues to finance big and small green field projects of known and unknown promoters. They have been benefited from such investments in the past. As the stock markets crumbled later on and the new issues flopped, small investors again began looking for a good opportunity. In this situation, mutual funds proved that they are able to deliver the goods. The concept of mutual funds was conceived to mobilize savings from the people and to invest them in a mix of corporate and government securities. The mutual fund managers actively operate this portfolio of securities and earn income through dividend, interest and capital gains, which is eventually passed on to mutual fund shareholders. So mutual funds are financial intermediaries.

A mutual fund is a collective investment vehicle. It is a pool of investors’ money invested according to pre-specified investment objectives. The benefits from the investment of the pooled money accrue to those that contribute to the pool. There is thus mutuality in the contribution and the benefit. Hence, the name “Mutual Fund” comes into existence. When mutual funds pool money from several investors, each investor does not contribute the same sum of money. Therefore each investor’s share in the fund is not equal. The benefits from the fund accrue to all investors in proportion to their share in the pool.
Thus a mutual fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is then invested in capital market instruments such as shares, debentures and other securities. The income earned through these investments and the capital appreciation realized are shared by its unit holders in proportion to the number of units owned by them. Thus a mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost. The flow chart below describes broadly the working of a mutual fund.

Fig : 1.2
Mutual Fund Operation Flow Chart

Mutual funds can be considered as baskets of investments. Each basket holds dozens or hundreds of security types, such as stocks or bonds. Therefore, when an investor buys a mutual fund, he is buying a basket of investment securities. However, it is also important to understand that the investor does not actually own the underlying securities--the holdings--but rather a representation of those securities; investors own shares of the mutual fund, not shares of the holdings.
The history of Mutual funds dates back to 1830’s when William I established first such fund in Belgium. Almost 40 years later, foreign and colonial government trust was established in England in 1868 followed by Massachusetts Investor’s Trust, Boston, U.S.A in 1924 (which is working still today). Slow growth had been the result of 1926 Great Depression which shook the world economy negatively affecting the public interest in stocks, and therefore in funds. Moreover, to revive the same, a formal attempt was made by forming Investment Company Act, 1940 to regulate the functioning of mutual funds. In 1960s, the industry finally grabbed the investor’s attention due to Jack Dreyfus Fund’s good performance and clever advertising. Market collapse of 1969-70 and then in 1973-74 again affected the public enthusiasm but gave a restart in 1980s, when total net asset grew as high as $58.4 billion in 1980 from a mere $0.50 billion in 1940, final corpus touching a figure of $1346 billion in 1989-90, finally crossed $2000 billion mark in 1994. By the same time total assets managed by mutual funds the world over had crossed a starting figure of $4000 billion mark.

Mutual fund operations in India have been growing at a phenomenal rate though it has been a somewhat restrained growth since the government has permitted only institutions in the public sector to launch mutual funds. The first mutual fund in India was the Unit Trust of India (UTI) established in 1963 under a special Act of Parliament. The Trust started its operations in 1964 and until 1987, it was the only player in the mutual funds market in India. UTI floated its most popular unit scheme-64 in 1964.

In 1987, the monopoly of the UTI came to an end when the Government permitted public sector banks and domestic financial institutions to set up mutual funds. Following this, a number of public sector banks like LIC (Life Insurance Corporation) and GIC (General Insurance Corporation) set up mutual fund ventures. In 1992, the
Government granted permission to the private sector also to enter the mutual fund industry. Kothari pioneer group was the first company to set up a private sector mutual fund. This was followed by the foray of a number of private sector enterprises into the field of mutual fund. The competition in this field got a further fillip with the entry of foreign funds.

Mutual funds create a range of products, called as mutual fund schemes, to cater to varying needs and preferences of investors. The term ‘fund’ may be used to denote the mutual fund itself, or any of its schemes. Mutual fund products also use terms like plan or option, to differentiate their product features. Usually a mutual fund product is first described by its investment objective. Investors choose mutual funds based on the match of the fund to their own objectives. Fund managers invest in securities such as equity and debt, according to the stated investment objective of the fund.

The investment in a mutual fund is represented to the investor in units. Just as investors in equity jointly hold shares of a company, so mutual fund investors jointly hold units of the fund. A mutual fund investor is called a unit holder just as an investor in equity shares is called a share holder.

Equity shares are offered to investors for the first time in an IPO (Initial public offering). Mutual funds are offered for the first time to investors in an NFO (New fund offer). Subsequently equity shares are bought and sold on the stock exchange. Mutual fund units can usually be bought and sold through the fund itself. Funds enable continuous transactions at their offices and at investor service centers. Some mutual funds are listed and can be bought and sold on the stock exchange. When an investor transacts with a mutual fund, units are allotted for purchase transactions, and units are redeemed for redemption transactions.
Total assets of a mutual fund refer to the market value of the securities held in the portfolio. A mutual fund does not hold any other long-term asset in its balance sheet. There may be few receivables and accrued income, which are current assets. These are added to the portfolio value to get the total assets under management (AUM) of the fund. On the liability side, a mutual fund does not have long-term liabilities. The assets are fully funded by the unit capital contributed by the investors. Mutual funds are not permitted to borrow funds to invest them in their portfolio. Liabilities of a fund are expenses associated with managing the portfolio, which are accrued as current liabilities and paid as they become due. Net assets of a fund refer to the market value of the portfolio, plus accrued incomes, less current liabilities and accrued expenses.

The net assets of a mutual fund may go up due to the following reasons:

- Entry of new investors
- Incomes from dividends or interest
- Realized gains from sale of investments
- Unrealized gain from increase in the value of investments

The net assets may go down due to the following reasons:

- Redemption by existing investors
- Expenses to be paid
- Unrealized losses from sale of investments
- Unrealized loss from decrease in the value of investments

Changes in the above factors bring about a change in the NAV of a mutual fund.

**ORGANISATIONAL STRUCTURE OF MUTUAL FUND**

The Mutual Funds in India are regulated by SEBI MF Regulations, 1996. Under the regulations mutual fund is formed as a Public Trust under the Indian Trusts Act,
These regulations stipulate a three-tiered structure of entities – sponsor (creation), trustees, and Asset Management Company (fund management) – for carrying out different functions of a mutual fund, but place the primary responsibility on the trustees.

The sponsor creates the Mutual fund and sets up the AMC. The mutual fund itself is structured as a trust, as required by law. It is managed by the trustees in the beneficial interest of the unit holders. Trustees appoint the Asset Management Company (AMC) to manage the fund.

Fig: 1.3

Organisation of a Mutual Fund

SEBI regulations define Sponsor as any person who either itself or in association with another corporate body establishes a mutual fund. Sponsor sets up a mutual fund to earn money by doing fund management through its subsidiary company which acts as Investment manager of the fund. Largely, a sponsor can be compared with a promoter of a company. Sponsors activities include setting up a Public Trust under Indian Trust Act, 1882 (the mutual fund), appointing trustees to manage the trust with the approval of SEBI, creating an Asset Management Company under Companies Act, 1956 (the Investment Manager) and getting the trust registered with SEBI.
The trust is created through a document called the trust deed which is executed by the fund sponsor in favour of the trustees. Trustees manage the trust and are responsible to the investors in the mutual funds. They are the primary guardians of the unit-holders funds and assets. Trustees can be formed in either of the following two ways - Board of Trustees, or a Trustee Company. The provisions of Indian Trust Act, 1882, govern board of trustees or the Trustee Company. A trustee company is also subject to provisions of Companies Act, 1956.

The Asset Management Company (AMC) is the Investment Manager of the Trust. Either the sponsor, or the trustees are authorized by the trust deed to appoint the AMC as the “Investment Manager” of the trust (Mutual Fund) via an agreement called as ‘Investment Management Agreement’. An asset management company is a company registered under the Companies Act, 1956. Sponsor creates the asset management company and this is the entity, which manages the funds of the mutual fund (trust). The mutual fund pays a small fee to the AMC for management of its fund. The AMC acts under the supervision of Trustees and is subject to the regulations of SEBI too.

The AMC is an operational arm of the mutual fund. AMC is responsible for carrying out all functions related to management of the assets of the trust. The AMC structures various schemes, launches the scheme and mobilizes initial amount, manages the funds and give services to the investors. In fact, AMC is the first major constituent appointed. Later on AMC solicits the services of other constituents like Registrar, Bankers, Brokers, Auditors, Lawyers etc and works in close co-ordination with them.

The functional departments in a typical AMC are: fund management, operation, sales and marketing, customer service, compliance, finance and accounts. Core function in these areas are done in-house, while other functions may be outsourced to constituents who offer specialized services.
The following table lists the various constituents and their roles:

Table No. 1.1

VARIOUS CONSTITUENTS AND THEIR ROLES

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodian</td>
<td>Hold and settle funds and securities</td>
</tr>
<tr>
<td>R&amp;T Agent</td>
<td>Maintaining and servicing investor folios</td>
</tr>
<tr>
<td>Banks</td>
<td>Enable collection and payment</td>
</tr>
<tr>
<td>Auditor</td>
<td>Audit scheme accounts</td>
</tr>
<tr>
<td>Distributors</td>
<td>Distribute fund products to investors</td>
</tr>
<tr>
<td>Brokers</td>
<td>Execute transactions in securities</td>
</tr>
</tbody>
</table>

Though the securities are bought and held in the name of trustees, they are not kept with them. The responsibility of safe keeping the securities is on the custodian. Securities, which are in material form, are kept in safe custody of a custodian and securities, which are in “De-Materialized” form, are kept with a Depository participant, who acts on the advice of custodian. Custodian performs a very important back office operation. They ensure that delivery has been taken of the securities, which are bought, and that they are transferred in the name of the mutual fund. They also ensure that funds are paid out when securities are bought. Custodians keep the investment account of the mutual fund. They collect and account for the dividends and interest receivables on mutual fund investments. They also keep track of various corporate actions like bonus issue, rights issue, and stock split; buy back offers, open offer etc and act on these as per instructions of the Investment manager.
A Mutual Fund manages money of many unit-holders across cities and towns of the country. Investor servicing not only becomes important but challenging as well. It is very impractical and expensive for any mutual fund to have adequate workforce all over India for this purpose. Instead, they use entities called as Registrars and Transfer Agents, which generally provide services to many mutual funds. This ensures quality services across all location and keeps the costs lower for the unit-holders.

R&T Agents are primarily responsible for creating and maintaining investor records and servicing them. Investor records are kept in numbered accounts called folios. They accept and process investor transactions. They also operate investor service centres (ISCs) which act as the official points for accepting investor transactions with a fund.

OBJECTIVES

➢ To study the attitude of investors towards mutual funds in India with special reference to Sivagangai district.

➢ To analyse the influence of demographic profile of investors on mutual funds.

➢ To recognize the factors responsible for the selection of mutual funds as an investment option.

➢ To identify the problems faced by the investors while investing and redeeming the investment from mutual funds.

➢ To suggest suitable solutions to solve the problems of investors.

➢ To educate individual investors about various types of Mutual Funds and as how to invest in them.
HYPOTHESES

➢ Demographic variables of investors do not have any impact on the level of satisfaction towards mutual funds.

➢ There is no significant difference in the importance of rating given by the investors in Sivagangai District on various factors that influence the choice of a mutual fund.

➢ There is no agreement among the investors of Sivagangai District in rating the significance on the options expected from a mutual fund.

➢ The favourable and unfavourable opinion of the investors on the problems faced by them after investing in mutual funds do not differ significantly.

RESEARCH METHODOLOGY

Sources of data

All the data required for this analytical study have been obtained mainly from primary sources, but at times, secondary sources of data have also been considered. The researcher has used interview schedule to collect the data. Secondary data have been collected from newspapers, magazines, websites, general discussion with brokers of NSE, BSE and published data of BSE, NSE and Mutual Fund companies, unpublished research reports, unpublished doctoral thesis, books etc.

Sampling

The investors’ population is spread all over District of Sivagangai. The researcher approached share brokers to collect the list of mutual fund investors. Out of the 8 taluks in Sivagangai district, share broker offices are only in 5 taluks – Sivaganga, Karaikudi, Devakottai, Thiruppattur and Manamadurai. As Karaikudi is considered next to Mumbai in stock-brokerage, many share broker offices are in Karaikudi. Most of the investors in
Sivagangai district invest and trade through the share broker offices located in Karaikudi. The researcher has selected 310 mutual fund holders. The detail of sampling plan is given in the table 1.2.

**Table No. 1.2**

**SAMPLE**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the taluk</th>
<th>Name of the leading broker office</th>
<th>No. of mutual fund holders interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Karaikudi</td>
<td>Integrated enterprises (India) Limited</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Karvy stock broking Limited</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Religare Securities Pvt. Limited</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sharekhan</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zen securities Pvt. Limited</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IL&amp;FS limited</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nirmal Bang Securities Pvt. Limited</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chona financial services</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veeyar &amp;Co.</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coimbatore capital market</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>273</strong></td>
</tr>
<tr>
<td>2</td>
<td>Sivagangai</td>
<td>Coimbatore capital market</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Devakottai</td>
<td>Angel Broking Pvt. limited</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Religare Securities Pvt. Limited</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Geojit BNP Paribas financial services ltd.</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sharekhan Investments</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veeyar&amp;Co.</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>23</strong></td>
</tr>
<tr>
<td>4</td>
<td>Thiruppathur</td>
<td>Religare Securities Pvt. Limited</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Manamadurai</td>
<td>Angel Broking Pvt. Limited</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>310</strong></td>
</tr>
</tbody>
</table>
TOOLS USED

Garrett Ranking

An attempt has been made to analyse

- The various reasons for withdrawing investment / not investing anymore in Mutual fund.
- The various reasons for investing their money in non-mutual fund.

As per this method, respondents have been asked to assign the rank for all factors and the outcome of such ranking has been converted into score value with the help of the following formula:

\[
\text{Percent position} = \frac{100 \times (R_{ij} - 0.5)}{N_j}
\]

where

- \( R_{ij} \) = Rank given for the \( i \)th variable by \( j \)th respondent
- \( N_j \) = Number of variables ranked by \( j \)th respondent

With the help of Garrett’s Table, the percent position estimated is converted into scores. Then for each factor, the scores of each individual are added and then total value of scores and mean values of score is calculated. The factors having highest mean value is considered to be the most important factor.

Cronbach’s Alpha Reliability Statistics

Cronbach’s Alpha is the most common measure of internal consistency. It is most commonly used when there are multiple linkert questions in a survey/questionnaire that form a scale, the reliability of the scale can be tested through this test.
The formula is:

\[
\alpha = \frac{K}{(K-1)} \left(1 - \frac{\sum S_{i}^2}{S_{T}^2}\right)
\]

where \( K \) is the number of items, \( S_{i}^2 \) is the variance of \( i^{th} \) item and \( S_{T}^2 \) is the variance of the total score formed by summing all the items.

Cronbach’s Alpha reliability co-efficient normally ranges between 0 and 1. The closer Cronbach’s Alpha co-efficient is to 1, the greater is the internal consistency of the items in the scale. Alpha value above 0.7 is probably reliable and Alpha below 0.69 is considered not reliable.

For testing the reliability of linkert five point scale used for identifying the factors influencing the opinion level, level of satisfaction, degree of agreement of the respondents relating to various aspects of mutual funds, problems faced by the respondents after investing in mutual funds, options expected from mutual fund, factors influencing the choice of mutual funds, Cronbach’s Alpha test is applied by using SPSS package.

**Mean-score value**

The level of investors’ satisfaction has been determined by the score values calculated for the statements associated with the factors determining the level of satisfaction of the mutual fund holders by adopting five point scaling technique.

Level of satisfaction has been classified into three categories namely low, medium and high level for analytical purposes.
Arithmetic Mean ($\bar{X}$) and Standard Deviation ($\sigma$) of the total opinion scores of the respondents have been computed. Scores above (Mean + $\sigma$) are considered to be high level of investors’ satisfaction, scores below (Mean – $\sigma$) are considered to be low level of investors’ satisfaction, scores in between (Mean + $\sigma$) and (Mean – $\sigma$) are considered to be medium level of investors’ satisfaction.

**Chi-Square test**

For testing the relationship between demographic variables such as sex, age, religion, marital status, self-employed, employed in public and private sector concerns, annual income, marital status of the respondents and their level of satisfaction towards mutual funds, Chi-square test has been applied.

The formula is

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

where $O$ refers to the observed frequencies and $E$ refers to the expected frequencies.

$$E = \frac{RT \times CT}{N}$$

where

- $RT$ = The row total for the row containing the cell
- $CT$ = The column total for the column containing the cell
- $N$ = The total number of observations

The value of $\chi^2$ ranges from zero to infinity. If $\chi^2$ is zero, it means that the observed and expected frequencies coincide. The greater the discrepancy between the observed and expected frequencies, the greater shall be the value of $\chi^2$. If at stated level
(generally 5% level is selected), the calculated value of $\chi^2$ is more than the table value of $\chi^2$, the difference between theory and observation is considered to be significant and null hypothesis is rejected. If the calculated value of $\chi^2$ is less than the table value of $\chi^2$, the difference between theory and observation is not considered to be significant and null hypothesis is accepted.

In case of rejection of null hypothesis, to know the strength of relationship between the dependent variables, contingency coefficient ‘C’ is computed when the number of rows and columns are equal.

$$C = \sqrt{\frac{\chi^2}{n + \chi^2}}$$

The lower limit of the contingency coefficient is assumed as zero. The upper limit of contingency coefficient is given by the expression

$$\sqrt{\frac{(r-1)}{r}}$$

where $r =$ number of rows.

When the number of rows and columns are not equal, to know the strength of relationship between the dependent variables, Cramer’s V statistic has been used.

The formula for Cramer’s V statistic is

$$V = \sqrt{\frac{\chi^2}{n (f-1)}}$$

where $f =$ number of rows or columns, whichever is less.

The lower limit of Cramer’s V statistic is 0 and its upper limit is assigned as 1.
Kaiser – Meyer – Olkin (KMO) and Bartlett’s Test

In order to group the related variables, the researcher has decided to use factor analysis. Moreover, for grouping the variables, the normality has to be ascertained. Hence for ascertaining the normality, the KMO test has been used.

The KMO measures of sampling adequacy is an index used to examine the appropriateness of factor analysis. The value between 0.5 and 1.0 indicates that the factor analysis is appropriate. If the KMO values lie between 0.7 to 0.8, then it is meritorious for factoring.

Barlett’s sphericity is a test statistic used to examine the shape of a normal distribution and also to verify the smoothness of the curve.

Factor Analysis

Factor Analysis is a technique adopted to identify the important factors which influence the opinion of the respondents about the degree of agreement relating to various aspects of mutual funds.

Factor analysis is a multivariate statistical technique in which there is no distinction between dependent and independent variables. In factor analysis all variables under investigation are analysed together to extract the underlined factors.

There are several methods available for factor analysis. But the principal factor method with orthogonal varimax rotation is mostly used and widely available in factor analytics computer program. One of the final outcomes of a factor analysis is called rotated factor matrix, a table of co-efficients that expresses the relation between the variables and the factors that have been prepared. The sum of squares of the factor loading of a variable is called communalities ($h^2$). The communalities of a factor are its
common factor variance. The factor where factor loading is 0.50 or greater are considered as significant factors.

In the present study, the principal factor analysis method with orthogonal varimax rotation is used to identify the important factors which influence the opinion of mutual fund holders about the degree of agreement.

If the variables are standardized, the factor model may be represented as

$$X_i = A_{ij}F_1 + A_{i2}F_2 + A_{i3}F_3 + …… + A_{im}F_m + V_iU_i$$

where

- $X_i = i^{th}$ standardized variable
- $A_{ij} =$ standardized multiple regression coefficient of variable $i$ on common factor $j$
- $F =$ common factor
- $V_i =$ standardized regression coefficient of variable $i$ on unique factor $i$
- $U_i =$ the unique factor for variable $i$
- $m =$ number of common factors

The unique factors are uncorrelated with each other and with the common factors. The common factors themselves can be expressed as a linear combination of the observed variables.

$$F_i = W_{i1}F_1 + W_{i2}F_2 + W_{i3}F_3 + …… + W_{ik}X_k$$

$F_i =$ estimate of $i^{th}$ factor

$W_i =$ weight of factor score coefficient

$k =$ number of variables
It is possible to select weights of factor score coefficient so that the first factor explains the largest portion of the total variance. Then, a second set of weight can be selected, so that the second factor accounts for most of the residual variance, subject to being uncorrelated with the first factor. This same principle could be applied for selecting additional weights for the additional factors.

**Student ‘t’ Test**

‘t’ – test is considered as an appropriate test for judging the significant difference between the means of two samples in case of small samples when population variance is not known. The relevant test statistic ‘t’ is calculated from the sample data and then compared with its probable value based on ‘t’ – distribution at a specified level of significance for concerned degrees of freedom for accepting or rejecting the null hypothesis.

For the purpose of effective research, the researcher has framed and tested the hypothesis that “the favourable and unfavourable opinion of the investors on the problems faced by them after investing in mutual funds do not differ significantly”.

\[
t = \frac{\overline{d} \sqrt{n}}{S}
\]

\[
\overline{d} = \frac{\sum d}{n}
\]

\[
S = \sqrt{\frac{\sum d^2 - n (\overline{d})^2}{(n-1)}}
\]

where \(\overline{d}\) = mean of the differences

\(S\) = standard deviation of the differences
When ‘t’ value is less than the table value at specified level of significance, null hypothesis is accepted, otherwise rejected.

**Weighted Average Score**

Weighted average method is used to rank and rate the significance of investors about the options expected from a mutual fund. The highest weight has been assigned for the highest degree. The weights are reduced by one for each successive degree thereby assigning the lowest weight (one) for the lowest degree. Total scores are arrived by way of multiplying the frequencies with their respective weights. Average scores are calculated by way of dividing the total score by the total number of observations in each case. Ranking is done on the basis of average score.

**Kendall’s Coefficient of Concordance test**

Kendall’s Coefficient of Concordance test is a non-parametric test. This test can be used to measure the ranking which is in the top position. The ranks are given to statements based on the total scores. Hence the test has been applied to know the level of significance about the options expected from mutual funds.

The formula for Kendall’s coefficient is

\[ W = \frac{12S}{m^2(k^3-k)} \]

where

\[ S = \sum_{i=1}^{n} (R_i - \bar{R})^2 \]

\[ \bar{R} = \text{mean value of total rank} \]

\[ m = \text{number of respondents} \]

\[ k = \text{number of items} \]
Using Kendall’s coefficient, chi-square value is calculated as below.

\[ \chi^2 = m(k-1)W \]

For a given degrees of freedom and chi-square value, the value of \( p \) is calculated at one percent level of significance. If \( p \) value is less than 0.01, null hypothesis is rejected, otherwise accepted.

**Kolmogorow-Smirnov Test (K.S Test)**

Kolmogorow-Smirnow test is used to analyse the hypothesis that there is no significant difference in the importance of rating given by the investors in Sivagangai district on various factors that influence the choice of a mutual fund. The formula is:

\[ D = O - E \]

\( D \) refers to calculated value

\( O \) refers to cumulative observed proportion

\( E \) refers to cumulative expected proportion.

In K.S Test, the cumulative observed proportion is calculated on the basis of observed number. In each case, the observed proportions are calculated by dividing the respondents. For all gradations, the same method of calculation is followed. Since there are five gradations, for each gradation, 0.20 is assigned as expected proportion.

For each gradation, the difference between cumulative observed proportion and cumulative expected proportion is calculated. The largest difference will be the calculated value, which is compared with the table value. If the calculated value is greater than the table value, the null hypothesis is rejected, otherwise accepted.
LIMITATIONS

For the research work, data were collected and interpreted with utmost reliability and consistency but due to prejudices of a few respondents, there are certain limitations.

- The study depicts the present scenario in the Sivagangai district and hence the result may not be applicable to another period of time.
- Answers obtained during the interview schedule depends upon the beliefs and prejudices of the investors.
- It is assumed that respondents are true and honest in expressing their views honestly and without any bias.
- The present study is restricted to information collected from the Mutual Fund investors only with the help of interview schedule.
- Lack of knowledge of capital market on the part of the respondents is another hindrance to an accurate data collection.

CHAPTERISATION

- The first chapter deals with the statement of the problem, concept of Mutual Fund, organisational structure of Mutual Fund, objectives, limitations and chapterisation.
- Review of related studies on mutual funds is presented in the second chapter.
- The third chapter gives an overview of Mutual Funds.
- The profile of the study area is given in the fourth chapter.
- The fifth chapter focusses on the analysis and interpretation of data.
- The last chapter is a concluding one which highlights the major findings of the study and offers a few suggestions.